AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

1-107. **(Cancelled)**

108. **(Currently Amended)** A method of treating allergy in humans comprising administering to a human at least one therapeutic composition in an amount sufficient to down regulate a protein allergen specific immune response in the human, wherein said therapeutic composition is administered in an initial treatment of three to six doses once a week for three to six weeks, and wherein the therapeutic composition comprises at least one isolated peptide having a defined sequence of amino acid residues, said peptide comprising at least about 20% of the T cell epitopes of the protein allergen, said peptide being reproducible and not being conjugated to any other molecule, said peptide having a mean T cell stimulation index of at least about 3.5 determined in an *in vitro* T cell proliferation assay with T cells obtained from a population of humans sensitive to said allergen, and said peptide having a positivity index of at least 150 as determined in an *in vitro* T cell proliferation assay with T cells obtained from a population of humans sensitive to said allergen.

109. **(Original)** The method of claim 108, wherein the peptide comprises 50 amino acid residues or less.

110-113. **(Cancelled)**

114. **(Original)** The method as in any one of claims 108-109 wherein the peptide is modified by at least one amino acid substitution, addition or deletion, said peptide comprising a T cell epitope recognized by a T cell receptor specific for the protein allergen.

115. **(Original)** The method as in any one of claims 108-109, wherein the peptide is purified to at least 90% purity.

116. **(Original)** The method of claim 115, wherein the peptide is purified to at least 95% purity.

117. **(Currently Amended)** The method of claim 116, wherein the peptide is purified to at least ~~about~~ 97% purity.

118-119. **(Cancelled)**

120. **(Original)** The method as in any one of claims 108-109, wherein the peptide is at least about 12 amino acid residues in length.

121. **(Original)** The method as in any one of claims 108-109, wherein the at least one peptide comprises at least two peptides.

122. **(Original)** The method as in any one of claims 108-109, wherein the protein allergen is selected from the group consisting of: a protein allergen of the genus *Dermatophagoides*; a protein allergen of the genus *Felis*; a protein allergen of the genus *Ambrosia*; a protein allergen of the genus *Lolium*; a protein allergen of the genus *Cryptomeria*; a protein allergen of the genus *Alternaria*; a protein allergen of the genus *Alder*; a protein allergen of the genus *Betula*; a protein allergen of the genus *Quercus*; a protein allergen of the genus *Olea*; a protein allergen of the genus *Artemisia*; a protein allergen of the genus *Plantago*; a protein allergen of the genus *Parietaria*; a protein allergen of the genus *Canine*; a protein allergen of the genus *Blattella*; a protein allergen of the genus *Apis*; a protein allergen of the genus *Cupressus*; a protein allergen of the genus *Juniperus*; a protein allergen of the genus *Thuya*; a protein allergen of the genus *Chamaecyparis*; a protein allergen of the genus *Periplaneta*; a protein allergen of the genus *Agropyron*; a protein allergen of the genus *Secale*; a protein allergen of the genus *Triticum*; a protein allergen of the genus *Dactylis*; a protein allergen of the genus *Festuca*; a protein allergen of the genus *Poa*; a protein allergen of the genus *Avena*; a protein allergen of the genus *Holcus*; a protein allergen of the genus

Anthoxanthum; a protein allergen of the genus *Arrhenatherum*; a protein allergen of the genus *Agrostis*; a protein allergen of the genus *Phleum*; a protein allergen of the genus *Phalaris*; a protein allergen of the genus *Paspalum*; and a protein allergen of the genus *Sorghum*.

123. **(Original)** The method of claim 122, wherein the protein allergen is selected from the group consisting of: *Der p* I; *Der p* II; *Der p* III; *Der p* VII; *Der f* I; *Der f* II; *Der f* III; *Der f* VII; *Fel d* I; *Amb a* I.1; *Amb a* I.2; *Amb a* I.3; *Amb a* I.4; *Amb a* II; *Lol p* I; *Lol p* II; *Lol p* III; *Lol p* IV; *Lol p IX* (*Lol p* V or *Lol p* Ib); *Cry j* I; *Cry j* II; *Can f* I; *Can f* II; *Jun s* I; *Jun v* I; *Dac g* I; *Poa p* I; *Phl p* I; and *Sor h* I.

124-127. **(Cancelled)**

128. **(Original)** The method as in any one of claims 108-109, wherein the composition further comprises a pharmaceutically acceptable carrier.

129. **(Original)** The method of claim 128, wherein the pharmaceutically acceptable carrier comprises at least one excipient selected from the group consisting of sterile water, sodium phosphate, mannitol, sorbitol, sodium chloride, and any combination thereof.

130. **(Original)** The method as in any one of claims 108-109, wherein the composition is soluble in an aqueous solution at a physiologically acceptable pH.

131. **(Original)** The method as in any one of claims 108-109, wherein said administering comprises a route of administration selected from the group consisting of oral, intravenous, sublingual, transdermal, inhalation, subcutaneous and rectal.

132. **(Original)** The method of claim 131, wherein said administering comprises subcutaneous administration of said composition.

133. **(Original)**The method as in any one of claims 108-109, wherein said composition is administered without adjuvant.

134. **(Cancelled)**

135. **(Currently Amended)** The method of claim ~~134~~ 108 further comprising administering an additional administration of said composition at intervals of between about three months and one year after said initial treatment.

136. **(Original)** The method as in any one of claims 108-109, further comprising the step of increasing the dosage with each subsequent additional dosage of said composition.

137. **(Cancelled)**

138. **(Original)** The method as in any one of claims 108-109, wherein treatment results in a statistically significant improvement in symptoms caused by the human's immune response to the protein allergen.

139-144. **(Cancelled)**

145. **(New)** A method of treating allergy in humans comprising administering to a human at least one therapeutic composition in an amount sufficient to down regulate a protein allergen specific immune response in the human, wherein the initial treatment comprises decreasing the dosage with each subsequent additional dosage of said composition, and wherein the therapeutic composition comprises at least one isolated peptide having a defined sequence of amino acid residues, said peptide comprising at least about 20% of the T cell epitopes of the protein allergen, said peptide being reproducible and not being conjugated to any other molecule, said peptide having a mean T cell stimulation index of at least about 3.5 determined in an *in vitro* T cell proliferation assay with T cells obtained from a population of humans sensitive to said allergen, and said peptide having a positivity index of at least 150 as determined in an *in vitro* T cell proliferation assay with T cells obtained from a population of humans sensitive to said allergen.

146. (New) The method of claim 145, wherein the peptide comprises 50 amino acid residues or less.

147. (New) The method as in any one of claims 145-146 wherein the peptide is modified by at least one amino acid substitution, addition or deletion, said peptide comprising a T cell epitope recognized by a T cell receptor specific for the protein allergen.

148. (New) The method as in any one of claims 145-146, wherein the peptide is purified to at least 90% purity.

149. (New) The method of claim 148, wherein the peptide is purified to at least 95% purity

150. (New) The method of claim 149, wherein the peptide is purified to at least 97% purity.

151. (New) The method as in any one of claims 145-146, wherein the peptide is at least about 12 amino acid residues in length.

152. (New) The method as in any one of claims 145-146, wherein the protein allergen is selected from the group consisting of: a protein allergen of the genus *Dermatophagoides*; a protein allergen of the genus *Felis*; a protein allergen of the genus *Ambrosia*; a protein allergen of the genus *Lolium*; a protein allergen of the genus *Cryptomeria*; a protein allergen of the genus *Alternaria*; a protein allergen of the genus *Alder*; a protein allergen of the genus *Betula*; a protein allergen of the genus *Quercus*; a protein allergen of the genus *Olea*; a protein allergen of the genus *Artemisia*; a protein allergen of the genus *Plantago*; a protein allergen of the genus *Parietaria*; a protein allergen of the genus *Canine*; a protein allergen of the genus *Blattella*; a protein allergen of the genus *Apis*; a protein allergen of the genus *Cupressus*; a protein allergen of the genus *Juniperus*; a protein allergen of the genus *Thuya*; a protein allergen of the genus *Chamaecyparis*; a protein allergen of the genus *Periplaneta*; a protein allergen of the genus *Agropyron*; a protein allergen of the genus *Secale*; a protein allergen of the genus *Triticum*; a protein allergen of the

genus *Dactylis*; a protein allergen of the genus *Festuca*; a protein allergen of the genus *Poa*; a protein allergen of the genus *Avena*; a protein allergen of the genus *Holcus*; a protein allergen of the genus *Anthoxanthum*; a protein allergen of the genus *Arrhenatherum*; a protein allergen of the genus *Agrostis*; a protein allergen of the genus *Phleum*; a protein allergen of the genus *Phalaris*; a protein allergen of the genus *Paspalum*; and a protein allergen of the genus *Sorghum*.

153. (New) The method of claim 152, wherein the protein allergen is selected from the group consisting of: *Der p* I; *Der p* II; *Der p* III; *Der p* VII; *Der f* I; *Der f* II; *Der f* III; *Der f* VII; *Fel d* I; *Amb a* I.1; *Amb a* I.2; *Amb a* I.3; *Amb a* I.4; *Amb a* II; *Lol p* I; *Lol p* II; *Lol p* III; *Lol p* IV; *Lol p IX* (*Lol p* V or *Lol p* Ib); *Cry j* I; *Cry j* II; *Can f* I; *Can f* II; *Jun s* I; *Jun v* I; *Dac g* I; *Poa p* I; *Phl p* I; and *Sor h* I.

154. (New) The method as in any one of claims 145-146, wherein the composition further comprises a pharmaceutically acceptable carrier.

155. (New) The method of claim 154, wherein the pharmaceutically acceptable carrier comprises at least one excipient selected from the group consisting of sterile water, sodium phosphate, mannitol, sorbitol, sodium chloride, and any combination thereof.

156. (New) The method as in any one of claims 145-146, wherein the composition is soluble in an aqueous solution at a physiologically acceptable pH.

157. (New) The method as in any one of claims 145-146, wherein said administering comprises a route of administration selected from the group consisting of oral, intravenous, sublingual, transdermal, inhalation, subcutaneous and rectal.

158. (New) The method of claim 157, wherein said administering comprises subcutaneous administration of said composition.

159. (New) The method as in any one of claims 145-146, wherein said composition is administered without adjuvant.

160. **(New)** The method of claim 145 further comprising administering an additional administration of said composition at intervals of between about three months and one year after said initial treatment.

161. **(New)** The method as in any one of claims 145-146, further comprising the step of increasing the dosage with each subsequent additional dosage of said composition.

162. **(New)** The method as in any one of claims 145-146, wherein treatment results in a statistically significant improvement in symptoms caused by the human's immune response to the protein allergen.